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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/509,493	05/15/2000	NAOKI OKINO	Q58562	2695

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EXAMINER

KILKENNY, TODD J

ART UNIT	PAPER NUMBER
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1733

14

DATE MAILED: 06/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/509,493

Applicant(s)

OKINO ET AL.

Examiner

Todd J. Kilkenney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 3-11-02 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Drawings

1. The corrected or substitute drawings were received on 3-11-02. These drawings are acceptable.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 10 – 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear where the preamble of claims 10, 11, 14 and 18 ends and the body of the claims begins. Is the limitation “wherein a resinous material is extruded from a die with a nozzle having a certain cross-sectional shape to be formed so as to have a certain cross-sectional shape substantially conforming to the cross-sectional shape of the nozzle” part of the preamble or a positively required method step?

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 10 – 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (EP 0748683) in view of Ichikawa (JP 59-85729) or Biffar (DE 3843342) and further in view of Todaka et al (US 5,807,588).

Takahashi et al. disclose a method for preparing a panel with a resinous frame wherein a shaped resin product is extruded through a shaping die (14) in a predetermined shape, pulled into a pressing member (20) and pressed so as to be unified to a panel (22), thereby obtaining a panel with a resinous frame (Figure 1, abstract). Takahashi et al. appear only to disclose extruding the resin using an extruder (12) failing to further define the type or components of the extruder (12).

Ichikawa teaches a plunger preplasticizing injection-molding machine, wherein a resin plasticizing process is disclosed. Referring to Figures 1 and 2, Ichikawa teaches an injection machine (unlabeled) upstream a die having a nozzle end (5). Resinous material is fed to the injection machine via a hopper wherein an extruding screw carries the molten resin to a spaces C and D of a plunger barrel (1). Plunger (13) injects the resin material toward the die (5) wherein it is extruded (See English Abstract).

Biffar teaches a device for discharging resin plastic using an extruder or plasticator (2) ("injection machine) upstream a mouthpiece (25) ("die"), wherein the mouthpiece (25) includes a nozzle like tip (26). Thermoplastic is fed to the extruder via hopper (41) where it is transferred to a plunger chamber (16) by what appears to be a screw. The resin is injected to the mouthpiece (25) and out of nozzle end (26) by two plungers (4 & 5).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to employ an extruder having a metering screw and plunger as the extruder means disclosed by Takahashi et al. since an extrusion apparatus comprising a metering screw and plunger is known as evidenced by Ichikawa and Biffar and one skilled in the art would be motivated to employ such an extruder so as to enable the back pressure of the metering screw to be more freely adjustable as compared to conventional screw extruders as disclosed by Ichikawa (English abstract) or as disclosed by Biffar to provide extrusion means that provide a simple way to discharge plastic without major temperature loss (English abstract).

As to claims 12 and 13, Biffar teaches an adjusting device (33) that acts to open or close the mouthpiece (25). Biffar's adjusting device is recognized as applicant's claimed flow controller as it acts to control the injection amount of resin through the nozzle end (26).

As to claims 14, 15, 18 and 19, Todaka et al. teach a controllable extrusion molding apparatus comprising an extruding molding machine wherein the amount of resin injected from the extruder is controlled in response to a relative moving speed of the panel (14). Specifically, Todaka et al. teach decreasing the peripheral speed of the panel (14) when changing from the rectilinear portion of the panel (i.e. the edge) to the corner portions, and at the same time, controlling the working speed of the extrusion molding machine actuator so that "the discharged amount of an extrusion material is relatively changed to follow up changes in the peripheral speed" of the panel (Column 2, lines 6 – 14; Column 6, line 60 - Column 7, line 52). Therefore, it would have been

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obvious to one of ordinary skill in the art at the time of the invention to control the injection amount of the resin material in the extrusion apparatus of Takahashi et al. in response to a relative moving speed of the panel as is known as taught by Todaka et al. as means to reduce cycle time in the continuous production of resin framed panels by allowing the robot operating the movement of the panel to be operated with speed capability so as to more efficiently match the resin extruded with the speed of the panel movement (e.g. moving the panel to apply resin around its corners).

As to claims 16, 17, 20 and 21, Todaka et al. teaches controlling an extrusion molding machine actuator to control the injection amount of resinous material in response to the relative moving speed of the panel. Only in an exemplary fashion do Todaka et al. teach that the extruder is a screw extruder and therein to control the injection amount of the resin, Todaka et al, disclose controlling the motor of the screw extruder. It is the examiner's position that one of ordinary skill in the art would readily recognize that Todaka et al.'s more general teachings to control the injection amount of resin in response to the relative moving speed of the panel provides obvious motivation for controlling the injection amount in such a process no matter what extrusion apparatus is employed. Therefore, as it is known that the injected amount of resin from an extruder is dependent on the pressure of extruding an extrusion material supplied by a molding machine actuator (Todaka et al., Column 2, lines 15 – 18), it would have been obvious to one of ordinary skill in the art at the time of the invention to control the moving speed of the plunger in a combination plunger and screw extrusion apparatus, wherein one skilled in the art would readily recognize that the plunger is in control of the

pressure of the discharging resin material. As discussed above, one of ordinary skill in the art would have been motivated to employ the plunger and screw extruding extrusion apparatus in the process of Takahashi et al. in view of Ishikawa or Biffar.

As to new claims 22 and 23, Takahashi et al. disclose extruding and pressing said resinous frame onto a panel.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishikawa (JP 59-85729). The rejection as stated in paragraph 3 of the previous office action (10-11-01) is maintained and hereby incorporated as reference.

8. Claims 10 – 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Biffar (DE 3843342). The rejection as stated in paragraph 4 of the previous office action (10-11-01) is maintained and hereby incorporated as reference.

Response to Arguments

9. Applicant's arguments with respect to claims 10 - 23 have been considered but are moot in view of the new ground(s) of rejection.

In regard to applicant's arguments towards Ishikawa et al. and Biffar and their failure to anticipate the invention of claims 10 and 11, applicant's arguments are not

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persuasive because they are commensurate in scope with the claimed invention.

Applicant argues that claims 10 and 11 each sets forth a molding method wherein no mold is used. While the claims do not include a mold, they are not recognized as limiting the placement of the extruded resin. Where the resin is extruded is not currently defined in claims 10 and 11. Both Ichikawa (Figures 1 and 2, element 5) and Biffar (element 33, Figure 1) are recognized as disclosing nozzles having cross-sectional shapes and that upon extruding the resin through said nozzles, it is inherent that the resin will conform to the cross-sectional shapes of the nozzles.

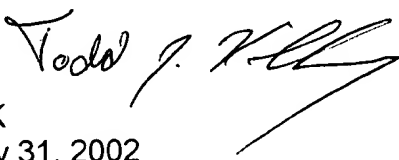
In regard to applicant's arguments in regard to modifying Todaka, in view of the new ground of rejection above wherein Todaka is employed as a secondary reference, applicant's arguments are moot.

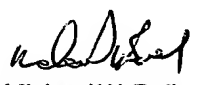
Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Todd J. Kilkenny** whose telephone number is **(703) 305-6386**. The examiner can normally be reached on Mon - Fri (9 - 5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


TJK
May 31, 2002


Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700